

ABSTRACT OF THE DISCLOSURE

A detector assembly including a support element, a first capacitor plate and a second capacitor plate. The support element is configured to attach the detector assembly to a chamber wall that separates a lower pressure region and a higher pressure region. A surface of the second capacitor plate is spaced apart from a surface of the first capacitor plate to define a capacitor gap. The first capacitor plate is positioned to be inside the lower pressure region when the detector assembly is attached to the chamber wall. The second capacitor plate is supported by the support element through insulating couplings. The detector assembly also includes a means for reducing mechanical load on the insulating couplings between the second capacitor plate and the support element. The reduced mechanical load includes load caused by a pressure difference between the lower and higher pressure regions.

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